



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/540,027

06/22/2005

Shigeru Tadokoro

050406

8867

23850 7590 07/18/2008
KRATZ, QUINTOS & HANSON, LLP
1420 K Street, N.W.
Suite 400
WASHINGTON, DC 20005

EXAMINER

COHEN, JODI F

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

07/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,027	Applicant(s) TADOKORO ET AL.	
	Examiner Jodi Cohen	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 16-29 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 16-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>01/09/2006, 06/22/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

METHOD OF PRODUCING POLYURETHANE FOAM SHEET AND LAMINATED
SHEET USING SAME

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 8-24, and 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hatano et al. (US 5,527,616).

Regarding claims 1, 2, 3, 8, 9 and 10, Hatano discloses a method of producing a polyurethane adhesive laminate or layer (Col 2; lines 37-48), comprising a liquid mixture obtained by the reaction of a polyisocyanate compound and a polyol, wherein the polyisocyanate is an isocyanate-terminated polyurethane type hot-melt with a molecular weight from 1,000 to 10,0000 (Col 8; lines 49-68), the polyol has two (diol) or more active hydrogen atoms in one molecule and the ratio of a weight equivalence of isocyanate groups within said polyurethane type hot-melt to active hydrogen atom-containing groups within said polyol ranges from 1.2 to 4 (Col 7; lines 49-65).

Furthermore, Hatano discloses applying the laminate foam adhesive in numerous

Art Unit: 1791

sheet-like manners such as by roller coating, spray coating, dip coating, electrostatic coating or extrusion coating onto a substrate or within two substrates by sandwich lamination and then introducing the polyurethane adhesive layer to water vapor in the open air, to cure or foam the mixture, (Col 13; line 46-Col14; lines 57) where the laminate can be peeled or unwound from the substrate (Examples). Hatano further discloses applying the liquid mixture in between a first and second substrate and applying a third substrate then curing the liquid mixture and peeling the laminate (Col 23; line 7-Col 24; line 39).

Regarding claims 4, 11, 16, 19, 22, and 26, Hatano discloses adding a catalyst to the polyurethane, diol hot-melt (Col 10; lines 9-25).

Regarding claims 5, 12, 17, 20, 23 and 27, Hatano discloses using a silane coupling agent with the in the polyurethane hot-melt, such as vinyl triethoxysilane which is considered a hydrolysable alkoxysilyl group (Col 10; line 40-Col 11; line 8).

Regarding claims 6, 13, 18, 21, 24, and 28, Hatano discloses that the isocyanate terminated polyurethane contains free isocyanate groups in an amount from .84 to 8.4% by weight (Col 3; lines 21-36)

Claim Rejections - 35 USC § 103

3. Claim 7, 25, and 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Hatano et al. (US 5,527,616).

Regarding claims 7, 25, and 29, Hatano discloses the viscosity of the polyurethane is from 500 to 4000 cps at 120 degrees Celsius, which is equal to 500 to

Art Unit: 1791

4000 mPa*s at 120 degrees Celsius, however the specification of the current application discloses a viscosity of 100 to 100,000 mPa*s at 125 degrees Celsius. It would have been obvious to one of ordinary skill in the art at the time of the invention that a 5 degree Celsius increase would not cause the viscosity of the polyurethane Hatano discloses to fall outside of the range of 100 to 100,000 mPa*s. See also Fig 1.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jodi Cohen whose telephone number is 571-270-3966. The examiner can normally be reached on Monday-Friday 7:00am-5:00pm Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/540,027
Art Unit: 1791

Page 5

/Jodi F. Cohen/
Examiner, Art Unit 1791
/Carlos Lopez/
Primary Examiner, Art Unit 1791